



ATTP 800-614-105
MLID # 17540
Issue 2, August 1, 2000
Updated June, 2001
Cover sheet issue 2.1

NOTE

This updated issue 2 is current, matches GR1275 issue 2 and it is to be used on all orders received by Installation Vendors on June 18, 2001 or later.

The document issue remains issue 2 to match GR1275 issue 2, however updated sections have been elevated to section issue 2.1. Refer to the issue checklist to determine which sections were updated.

AT&T

GENERIC INSTALLATION REQUIREMENTS

ADDENDUMS, EXCEPTIONS & ADDITIONS

TO

BELLCORE GR-1275-CORE CENTRAL OFFICE
ENVIRONMENT, INSTALLATION/REMOVAL GENERIC
REQUIREMENTS DOCUMENT



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ISSUE CHECKLIST

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The following listing indicates the latest Issue of the AT&T Generic Installation Requirements Sections with the corresponding Issue and Date.

NOTE: Issue 2.0 of this document corresponds with issue 2.0 of the GR1275. A point issue update with its corresponding date will represent updates to existing sections.

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PREFACE

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The Telcordia GR-1275-CORE Central Office Environment Installation/Removal Generic Requirements document contains the basic generic installation standards adopted by AT&T.

This Generic Installation Requirements practice covers AT&T's generic installation standards exceptions, modifications, and addendums to the Telcordia GR-1275-CORE document.

Installation Suppliers performing work in any AT&T Office shall follow rules defined in the Telcordia GR-1275-CORE document and apply the AT&T exceptions, modifications, and addendum's as outlined herein.

The "external" Installation Supplier shall obtain the latest version of GR-1275-CORE document directly from Telcordia. Internal suppliers and/or users shall obtain this document from the appropriate WEB Site using the URL (address) and password supplied by AT&T.

The "external" Installation Suppliers shall obtain this document from AT&T Supplier Management and or by accessing InfoSwap. Internal suppliers and/or users shall obtain this document by accessing the appropriate WEB Site using information provided by AT&T.

The Installation Supplier shall review both documents in detail before performing any service purchased by AT&T.

In the event that information contained in the GR-1275-CORE and this AT&T document conflicts with the Product Manufacturer's published information, or if the supplier determines that the rules provided are not correct and/or sufficient enough to perform the work requested by AT&T, it is the Supplier's responsibility to contact the AT&T Engineer to resolve the conflict.

The Supplier is responsible for obtaining all necessary publications, documents, and data required to perform the services purchased by AT&T.



USER INSTRUCTIONS

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The following instructions are intended to aid the user in understanding the method used to modify the information in the Telcordia GR-1275-CORE document to meet AT&T's requirements.

This document follows the format of the associated GR-1275-CORE. Paragraph numbers shown herein correspond to that of GR-1275-CORE and action verbs "Add", "Delete" or "Replace With" are used throughout the document to indicate AT&T's deviations.

Definition of the "Action Verbs" is as follows:

ADD

Directs the document user to incorporate (include) the information given in this document to the specified section and/or subsection in the GR-1275-CORE. This information will be in addition to that existing in GR-1275-CORE.

An added requirement with an alpha suffix indicates that it is an AT&T requirement. This requirement shall be added directly after the similarly numbered GR-1275-CORE instruction.

DELETE

Directs the document user to disregard the specified section, subsection, or paragraph from the GR-1275-CORE instruction.

REPLACE or REPLACE WITH

Directs the document user to replace the specified information in the GR-1275-CORE with the information shown in this document. If it is not the entire section or subsection that must be replaced, then, the words that need replacing and the words to replace with are written within quotation marks.

Some sections of GR-1275-CORE may refer to AT&T documents for additional information. Internal and external users will link to these documents through the AT&T WEB and InfoSwap. Adobe Acrobat software is required to read both GR-1275-CORE and AT&T Installation Generic Requirements' documents.



INTRODUCTION

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Issue 2, Aug. 1, 2000
Sect 1 Issue 2.1

1.0 Introduction

This Addendum reflects the AT&T installation requirements as they differ from the Telcordia GR-1275-CORE document.

Paragraph numbers shown herein reflect the relative position of the new/modified information with respect to the Telcordia GR-1275-CORE Issue 2 document.

ADD

The combined documents, Telcordia's GR-1275-CORE and the "AT&T Installation Generic Requirements", provide installation service suppliers general workmanship requirements necessary to effectively interface with AT&T when equipment is installed, modified, and/or removed in AT&T Central Offices. These requirements will be used as one of the criteria for AT&T job acceptance.

AT&T has standardized on Telcordia GR-1275-CORE (Central Office Environment Installation/Removal Generic Requirements) as the primary document to be used by installation suppliers when installing, modifying, rearranging, removing, telecommunication equipment in AT&T central offices. The "AT&T Generic Installation Requirements" document highlights AT&T's deviations to the GR-1275-CORE document and links to other AT&T associated documentation.

In the event any requirement contained in these two documents conflict with the terms and conditions of the contract between the supplier and AT&T, the contract terms and conditions shall prevail. **If any conflicts are encountered between GR1275-CORE and ATTP 800-614-105 and associated documents the ATTP 800-614-105 and associated documents shall take precedence.**

The TC representative referred to in GR-1275-CORE is equivalent to the equipment engineer listed on the face sheet of AT&T's Telephone Equipment Order (TEO).

1.1 - 1.6 No Changes



BUILDING REQUIREMENTS

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2. Building Requirements

2.1 – 2.12 No Changes



3. Regulations

3.1 - 3.2 No Changes

3.3 Hazardous Materials

ADD R3-9A

R3-9A Effective 10/01/96, the Hazardous Waste Process became AT&T's Mandatory responsibility. All hazardous waste must be processed by the NATIONAL HAZARDOUS WASTE CENTER. All waste must be handled by a certified disposal company that is approved by AT&T. Call 1-800 8WASTE9 (1-800-892-7839) for all questions and advice on hazardous material/waste.



4. Safety

4.1- 4.12 No Changes

**** (Additional AT&T requirements for Telcordia GR1275 Section 4 are covered in the AT&T Contractor E,H & S Program Practice below) ****

These instructions are controlled by the Environmental, Health & Safety (E, H & S) organization and are covered under AT&T Practice ATTP 010-160-012.

Click here to access:

[ATTP 010-160-012](#)

If you have any questions on the content of this Environmental, Health & Safety Practice, please contact Allen C. Hilbert on (717) 852-0982, or E-Mail ahilbert@ems.att.com



5. Hazardous Materials/Waste

5.1 Introduction

ADD

Effective 10/01/96, the Hazardous Waste Process became AT&T's Mandatory responsibility. All hazardous waste must be processed by the NATIONAL HAZARDOUS WASTE CENTER. ALL waste must be handled by a certified disposal company that is approved by AT&T. Call **1-800 8WASTE9 (1-800-892-7839)** for all questions and advice on hazardous material/waste.

National Hazardous Waste Center will assume responsibility for assuring that all the correct information is reported to the proper government entities in the event hazardous waste needs to be shipped. They will also prepare all the paperwork for shipping the waste, and arrange for the pickup.

Hazardous waste manifests must be signed by an AT&T employee who has been trained. It is a FELONY VIOLATION for anyone not having had the training to sign the manifests. AT&T employees are advised not to sign Hazardous Waste Manifests if they do not have the required training.

ADD R5-1A

R5-1A In the event hazardous material has to be removed from the equipment, the supplier will notify AT&T's representatives to call Environment, Safety & Health Organization (EH&S) at **1-800-8 WASTE 9** for instructions on purging, separating and packaging of hazardous material.

5.2 – 5.4 No changes



**JOB START, IN PROCESS COMPLETION,
AND ACCEPTANCE**

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Sect 6 Issue 2.1

6. Job Start, In Process Completion , and Acceptance

6.1- 6.8 No Changes

**** (Additional AT&T information relating to Telcordia GR1275 Section 6 are covered in the AT&T ITA (Installation Test and Acceptance) Process Flows and Work Instructions below)****

This section is controlled by the ITA (Installation Test and Acceptance) organization.

Click here to access: **ITA Process Flows and Work Instructions**

Questions pertaining to the contents shall be referred to:

Monica Dias

Tel 925 224-3075

Cell 209 610-6434

E-mail mhufford@ems.att.com



METHOD OF PROCEDURE (MOP)

7. Method Of Prodedure (MOP)

7.1- 7.9 No Changes

**** (Additional AT&T instructions relating to Telcordia GR1275 Section 7 are covered in the AT&T Ask Yourself Network Operations Handbook below)****

These instructions are controlled by the NPQ organization and are covered under AT&T Practice ATTP 010-515-170.

Click here to access:

[ATTP 010-515-170](#)

If you have any questions on the content of this "Ask Yourself" Practice, please contact Barbara J. Rogers on (770 785-3571 or E-Mail brogers1@ems.att.com



8. Commonly Used Tools

8.1 Introduction

ADD R8-1A

A tool is considered insulated (electrically) only if so rated by the manufacturer.



WORKMANSHIP REQUIREMENTS
General Information

ATTP 800-614-105
Issue 2, Aug. 2, 2000

9. Workmanship Requirements - General Information

9.1 - 9.7 No Changes



10. Workmanship Requirements - Auxiliary Framing, Bracing, and Cable Rack

10.1-10.6 No Changes

10.7 Cable Rack

Replace 10.7.3 with 10.7.3A

10.7.3A Description and Sizes

Cable racks are ladder type steel structures consisting of two 2 inch x 3/8 inch, rectangular side rails called "stringers" between which welded on 9 inch centers are 1 inch x 1/2 inch cross members called "straps". The first and every other strap of 2 ft 1 inch wide cable rack is reinforced with 1 inch x 1/4 inch steel bar.

AT&T requires the use of solid bar type cable racks. The use of channel or tubular type is not permitted by AT&T. Cable racks are furnished in lengths of 9 ft 8-1/2 inches and various widths as shown in Figure 10-32.

Add 10.7.A Usage of Cable Rack Horn Assemblies and Cable Rack "L" Brackets on Horizontal Cable Racks

Cable Rack Horn Assemblies and Cable Rack Brackets may be attached to horizontal ladder type cable racks to provide cable pile up support and/or separation.

10.7.A.1 Cable Rack Divider Horn Assemblies

Cable Rack Divider Horn Assemblies are used to divide the ladder rack into individual compartments. They should be attached to every other cross-strap at the position required to split the rack into appropriate widths.

10.7.A.2 Cable Rack Horn Assemblies

Cable Rack Horns are used on the side rails of any panned cable rack level. When used for this purpose, they are normally mounted on alternate straps and alternate sides of the cable rack.



WORKMANSHIP REQUIREMENTS
Auxiliary Framing, Bracing, & Cable Rack

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10.7.A.3 Compartment Type Cable Rack Horn Assemblies

Compartment Type Cable Rack Horns may be used as required to separate various cable type such as Power, DS1/DS3 etc.... from the common cable types. When used for this purpose these horns are located on either or both sides of the cable rack at every strap. Cables located on Compartment Type Rack Horn Assemblies need to be tied with cord every other Horn Assembly.

Add 10.7.A.4 Cable Rack "L" Brackets

"L" Cable Rack brackets may be attached below ladder type cable racks to provide cable support and/or separation. These brackets are located on either or both sides of the cable rack at every strap.

Cables located on Cable Rack Brackets need to be tied with cord every other Bracket Assembly.

The height of the bottom portion of the "L" Cable Rack brackets shall be no lower than 7 ft. 2 in. from the floor.



WORKMANSHIP REQUIREMENTS
General Assembly, Frameworks, Units, &
Misc.

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Sect 11 Issue 2.1

**11. Workmanship Requirements - General Assembly, Frameworks, Units
and Misc.**

11.1 - 11.4 No Changes

11.5 Conduit, Lighting, and AC Outlets/receptacles

ADD 11.5.1A

11.5.1A AC Convenience Outlets

AC **convenience** outlets should be provided every fourth bay e.g. bays 1, 5, 9, 13 etc... .
(This item will be incorporated with more detail in the next issue update of AT&T
NEDS - Network Equipment Design Standards)

11.6 - No Changes



WORKMANSHIP REQUIREMENTS
General Firestopping Considerations

12. Firestopping Of Penetrations

12.1 – 12.8 No Changes

**** (Additional AT&T requirements for Telcordia GR1275 Section 12 are covered in the AT&T Fire Stopping Penetrations Practice below) ****

These instructions are controlled by the Environment, Health and Safety organization and are covered under AT&T Practice ATTP 770-350-100.

Click here to access: **[ATTP 770-350-100](#)**

If you have any questions on the content of this “Fire Stopping” Practice, please contact Jennifer Nelson (908) 630-2501, or E-Mail jnelson1@ems.att.com



WORKMANSHIP REQUIREMENTS **CABLING AND WIRING**

ATTP 800- 614-105

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Sect 13 Issue 2.1

13. Workmanship Requirements – Cabling and Wiring

13.1 – 13.15 No Change

ADD 13.16.A

13.16.A Cables carrying DS1/DS3 signal

Cables carrying DS1/DS3 signals shall be separated from all power cables using the following choices

1. Cable bundling
2. Use of cable rack divider Horn Assemblies
3. Use of compartment type cable rack Horn Assemblies
4. Use of cable rack “L” brackets under cable racks
5. Build new cable racks

When cable bundling is used, the DS1/DS3 cables must be separated from the power cables. In situations where a DS1/DS3 bundle must cross a power bundle/cable, the wire bundle that is on top shall be wrapped in fiber & secured with twine.

DS1 cables

When specifically requested in the equipment order, cables carrying DS1 signal shall always be labeled in both ends at the cable butting point with one flag-type label. The label shall be marked at both ends with the proper source and destination. It shall contain the “Near End” information (located on upper portion of label), the “Far End” information (located on the bottom portion of the label), the FIC code, Jack #, and supplier’s name.

DS3 cables

Cables carrying DS3 signals shall be labeled as follows using flag-type labels:

1. Individually run DS3 cables shall be labeled at both ends with the proper source and destination. The label information shall contain the “Near End” information (located on the upper portion of label), the “Far End” information (located on the bottom portion of the label), the FIC code, Jack #, and supplier’s name.
2. In the case of multiple DS3 cables under one sheath, ex: 6 pack, 8 pack, etc, one label for each sheath/bundle will suffice. In these cases however the sheath must be butted by the bay upright at a point level with the cable terminations. The label must be applied at the point where the cable is butted (this is so that each individual cable is easily identified). If the cable sheath is butted anywhere else, the labels shall be applied to each individual cable. Anytime an individual cable is disconnected, it shall be labeled accordingly so that it can be reconnected properly



WORKMANSHIP REQUIREMENTS
CABLING AND WIRING

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Flag type labels

Labels shall be the pressure sensitive type, use commercial grade adhesive and shall be fire retardant. The labels shall approximately 1 1/2" or less in width and have enough lines to print the information required. They shall be visible at all times.

ADD 13.16.B

**13.16.B Cables carrying Timing (Synchronization) & Critical Telemetry signals
(NSDnet, TCP/IP, TiNet/LNSNet etc...)
(If Fiber Cables refer to section 22)**

Above type cables shall be individually labeled at both ends same as above.

13.17 – 13.18 No Change

13.19 Unsecured Cable

Replace R13-180 with R13-180A

R13-180A Where ladder type racks are to be used for unsecured cable runs, the cable racks shall be equipped with removable cable **retaining horns and panning**. Maximum cable pile up shall be 1" below the upper tip of the retaining horns. Metal Panning or plastic panning may be used.

When plastic panning is used, the following requirements shall be met:

- The plastic material must meet Telcordia NEBS GR63 CORE Mechanical Element requirement R4-25 under 4.2.3 i.e. have an oxygen index of 28% or greater as determined by ASTM Standard D 2863-77 and meet a UL 94 V-0 or better. The plastic panning must be strong enough to support cables between cable rack straps at a minimum capacity of 25 lbs. PSF. The name of the plastic panning manufacturer and part # must be permanently marked on the bottom of each plastic panning sheet at least every 5 ft.
- This marking must be visible to the auditors (facing downward through the cable rack between the straps). If the plastic manufacturer does not mark this information on the plastic panning, the Installation Vendor must do the marking.

**Panning shall be omitted in the portion of a cable rack penetrating a wall.
Cable going through the penetration shall be tied at the first and last strap.**

13.20 – 13.22 No Change



RESERVED FOR FUTURE USE

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14. Reserved For Future Use



WORKMANSHIP REQUIREMENTS
CONNECTING

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15. Workmanship Requirements - Connecting

15.1 - 15.11 No Change



WORKMANSHIP REQUIREMENTS
Equipment Designations

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16. Frame Identification Code (FIC)

16.1 – 16.9 No Changes

**** (Additional AT&T requirements for Telcordia GR1275 Section 16 are covered in the AT&T Frame Identification Code (FIC) Practice below) ****

These instructions are controlled by the Vendor Development and Network Standards organization and are covered under AT&T Practice ATTP 751-100-785AC.

Click here to access: **ATTP 751-100-785AC**

If you have any questions on the content of this “Frame Identification Code”, please contact Keith Lanning (404) 810-2286, or E-Mail klanning@ems.att.com



17. DC Power Systems, Engineering and Installation Standards

17.1 – 17.13 No Changes

**** (Additional AT&T requirements for Telcordia GR1275 Section 17 are covered in the AT&T DC Power Systems Practice below) ****

These instructions are controlled by the NPQ organization and are covered under AT&T Practice ATTP 790-100-669. (MLID 9583)

Click here to access:

[ATTP 790-100-669](#)

If you have any questions on the content of this DC Power Practice, please contact Vernon Morris on (404) 810-6389, or E-Mail vmorris@ems.att.com



WORKMANSHIP REQUIREMENTS
Bonding and Grounding – Integrated Ground
Plane

ATTP 800-614-105
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Sect 18 Issue 2.1

18. Grounding and Electrical Protection for AT&T Telecommunication Buildings and Equipment

18.1 No Changes

18.2 General

ADD R18-1A

All grounding connections to bays or cabinets shall be made with a listed two hole compression copper/tinned copper connector secured by hex head screws equipped with external tooth star washers. The washers shall be located between the head of the screw and the upper surface of the lug. Both the screws and the washers should be made of zinc plated steel.

ADD R18-1B

Field mounted units/shelves equipped by the manufacturer with a grounding pigtail shall have the lead connected to the bay/cabinet framework. This connection shall be made using appropriate screw/screws and external tooth star washer/washers. Both the screws and the washers should be made of zinc plated steel.

18.3 No Changes

**** (Additional AT&T requirements for Telcordia GR1275 Section 18 are covered in the AT&T Grounding and Protection for AT&T Telecommunication Buildings and Equipment below) ****

These instructions are controlled by the NPQ organization and are covered under AT&T Practice ATTP 803-501-100 (MLID 12914).

Click here to access:

ATTP 803-501-100

If you have any questions on the content of this DC Power Practice, please contact Jesse F. Stearns Jr. (Frankie) on (404) 810-4293, or E-Mail fstearns@ems.att.com



WORKMANSHIP REQUIREMENTS
Isolated Ground Plane

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**19. Grounding and Electrical Protection for AT&T Telecommunication
Buildings and Equipment**

19.1 – 19.3 No Changes

**** (Additional AT&T requirements for Telcordia GR1275 Section 19 are covered in the AT&T
Grounding and Protection for AT&T Telecommunication Buildings and Equipment below) ****

These instructions are controlled by the NPQ organization and are covered under AT&T Practice
ATTP 803-501-100 (MLID 12914).

Click here to access: **[ATTP 803-501-100](#)**

If you have any questions on the content of this DC Power Practice, please contact
Jesse F. Stearns Jr. (Frankie) on (404) 810-4293, or E-Mail fstearns@ems.att.com



**Workmanship Requirements - Equipment
Removals**

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20. Workmanship Requirements - Equipment Removals

20.1 – 20.26 No Change



WORKMANSHIP REQUIREMENTS
Equipment Retired In Place

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21. Workmanship Requirements - Equipment Retired In Place

21.1 – 21.10 No Change



**Fiber Optic Generic Requirements Central
Office Installation**

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22. Intra-Office Fiber Optic Standards Document (MLID 13788)

22.1 – 22.13 No Changes

*****(Additional AT&T requirements for Telcordia GR1275 Section 22 are covered in the AT&T
Intra-Office Fiber Optic Standards Document Practice below)*****

Click here to access: **[Fiber Diversity and Protection Guidelines](#)**

Questions pertaining to the contents shall be referred to:

Donato Mitrano
9403 Queens Blvd.
Flushing, NY. 11374-1144
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23. Installer Skill Level Assessment

23.1 – 23.3 No Change



**50. Raised Floor Equipment Installation Standards for AT&T
Equipment Locations**

The Raised Installation Standards contained herein fall into two categories:

1. Section 50A

**Raised Floors where equipment does not attach directly to the tile,
(Tate floors or equivalent).**

2. Section 50B

**Raised Floors where equipment attaches directly to the tile,
(Maxcess Floors or equivalent).**

**50A. Raised Floors where equipment does not attach directly to the tile,
(Tate Floors or equivalent).**

50A.1 Overview

For all new telecommunication equipment space, AT&T is requiring that the equipment be mounted on a raised, seismic Equipment Mounting Platform System (EMPS) **ATTP 760-200-110**, similar to that used in computer facilities. This platform was originally developed to be compatible with all equipment designs & seismic zones. However floor manufacturer must be consulted when placing this EMPS in seismic zones 2B-4.

Click here to access: **[ATTP 760-200-110](#)**

If you have any questions on the above EMPS practice, please contact William H. Henderson on (404) 810-7249, or E-Mail hendersonwh@att.com

50A.2 Floor Height

The Company's standard is a twenty-four inch finish platform height although there are many existing raised floors that are three and four feet. Installation procedures are the same regardless of the height. Finished floor height is to be measured from concrete floor to top of removable panel.



50A.3 Cabling Overview

Running cable under a raised floor must be done in a manner similar to running cable overhead on cable racks. When establishing new Raised Floor areas or extending an existing Raised Floor, a specific cable plan record shall be created. This cable plan shall be based on the AT&T development plan, architectural plan and existing telephony records. The AT&T AORS document shall be used as a guide.

The cable plan record shall be documented as a record in the –600 series. All cable paths shall be identified by cable routing coordinates and based on cable type. Cable shall be routed to maintain segregation, allow even cable loading and minimize under floor bridging. The cable must be neat, protected, sewn when on racks, and must not be mixed with other types of cable. The only cable racks used under the floor are for primary power cables from the power room. Cable Rack bridges are required when crossing a power rack. Secondary power feeders and transmission cable are run directly on the concrete floor. AC conduits are run separately and attached at the high end of the pedestals that support the raised floor. For the Fiber Protection System (FPS) placement refer to sect 22, Fiber Diversity and Protection Guidelines.

Golden Path & Non Golden Path cables shall be run according to the Golden Path guidelines. Fire Detection and Ground wires shall be run separate from transmission cables.

Transmission cables shall be run on the concrete following the cabling rules

50A.3.1 Raised Floor Cabling Rules

- Cable paths shall be designated and recorded in a – 600 series job drawing. No deviations are allowed.
- All cable diversity rules such as “Golden Path” and power must be followed under the floor as well as above.
- Transmission cable to be run neatly directly on concrete floor in designated paths and protected from all sharp metal edges.
- Primary power cables shall be located on a cable rack and recorded on –600 series drawing and sewn as necessary.
- Secondary power cables and coaxial cables shall be run on the concrete slab and shown and recorded on the –600 plan drawing.
- Cable rack bridges should be used for cross aisles per the office cable plan to prevent mixing of shields and intermingling of cable.
- Refer to sect 22 Fiber Diversity and Protection Guidelines document for method of placing FPS (Fiber Protection System) or riser cables.
- Primary power runs from power room to PD/BDFB are to be secured on cable racks under the raised floor. Cable racks to be mounted on u-channel and must be grounded to central office ground (COG), not isolated ground.



- Primary Distribution that feeds equipment directly (not through a secondary distribution bay), is allowed to use the primary distribution racking system until it reaches the equipment area. While it is on the primary rack, such distribution shall meet all primary distribution requirements. Once it leaves the primary rack, it shall be treated as secondary distribution.
- Secondary power feeders from a PD / BDFB are to be run on concrete floor. If red and blue wire is used, they shall be diversified. They can be run under the same lineup, but should be banded on opposite sides of the lineup.
- Secondary power wire shall be bundled at least every six feet. This bundling may be accomplished by using either waxed twine or plastic wire ties.
- If red and blue wire is used, the red wire bundle shall be separated from the blue wire bundle by a minimum of four (4) inches except at the input to equipment bays or "cross-over" points.
- When secondary power distribution cables must cross, they should do so at as close to a 90-degree angle as possible. and with as little contact as possible. The wire bundle that is on top shall be fiber wrapped at the cross point. The fiber wrap shall be secured with either twine or a plastic tie wrap.
- At power wire crossover points there shall only be two bundles. Additional wire must be placed in existing bundles and NOT in additional bundles on top of the existing two bundles.
- Under normal conditions, floor stringers "Shall Not" be removed to install cables. If office and/or job conditions require the stringers to be removed, the procedure must be listed in the MOP and approved by the appropriate AT&T representative.
- The area under the Raised Floor shall not be used for storage.

50A.3.2 Bringing cable up from under raised floor

When bringing cable into racks/cabinets, the removable raised floor tile is cut to the rack/cabinet template, with the edges of the cut hole properly lined to protect the cable. There are several trim products that can be used to line/trim the tile edges of the cut out or hole to protect the cables from the sharp edges of the cut tile (**tape of any kind is not allowed**). Additional details may be found in ATTP760-200-110.

These trim products or equivalent are recommended:

- "F" Trim Cut-Out Molding/Trim and "Cut Out Sponge Seal". The "F" shaped trim is used for square shaped cut outs, it is attached to the top/bottom of the tiles with pop rivets or screws. The Sponge Seal is inserted in the F groove and slits are cut thru it to pass cables thru. This product has to be cut to fit and can be obtained from Maxcess Floors or other manufacturers.
- "L" shaped Cut Out Molding/Trim is used the same as the "F" trim but has no groove for the Sponge Seal. This trim is attached to the tile the same as the "F" trim. This

product has to be cut to fit and can be obtained from Maxcess Floors, Grom Tek or other manufacturers.

- Some manufactures provide pre-cut square, rectangular and three sided trims cut-out to certain sizes.
- For simple round cut cutouts, the industry has available various diameter round grommets i.e. 2", 3", 4" & 5". They can be purchased from Maxcess Floors or other manufacturers..

50A.3.3 Cable racks

The only cable racks used under the raised floor are for the primary power cable from the power room & vertical racks to cable enclosures.

These cable racks must meet these requirements:

- Horizontal cable rack must be mounted on u-channel anchored to the concrete floor.
- Cable rack must be grounded to integrated ground.
- Cables in vertical rack to cable enclosure must be secured on every strap and rack must be grounded to integrated ground.

50A.4 Equipment Installation

50A.4.1 Leveling of equipment

The raised floor is laser leveled at time of the floor installation so no leveling blocks or shims should be necessary to level the frames. This is especially important in seismic zones 2B and higher as leveling blocks would cause a rocking motion of the frames during an earthquake. If a vendor finds the floor is not level they should contact the AT&T Equipment Engineer.

50A.4.2 Cutting and drilling of removable floor tile

Mark removable floor tile for the cable access from below into the cabinet using template supplied by frame vendor, floor plan drawing, or place frame in proper footprint and mark the tile from the base of the frame or cabinet. Mark the tile for the frame anchoring holes in the same manner. Remove the tile, cut cable access holes, and drill anchoring holes through the tile in an area away **from the equipment** to make sure the equipment area is not contaminated with metal shavings. If the floor plan identifies a future frame on the same tile as the one you are adding a frame, it is necessary to drill and cut the tile for the future frame as you cannot remove the tile later.

50A.4.3 Framework Anchoring Details

(These standards are listed here on a temporary basis. An anchoring practice is being developed by Infrastructure Standards. The new standard will replace this section when completed)

(Some additional anchoring information may be found in ATTP 760-200-110)

To anchor framework to a raised floor, the vendor must first know what earthquake zone the equipment is being installed in. **In zones 0 -2A, the frames shall be secured to the raised floor with four short ½ in threaded rods through two u-channel sections mounted perpendicular to the aisle and across the bottom of the floor tile and stringers. In zones 2B – 4, the frames shall be secured by using four ½ inch threaded rods extending through the raised floor and connected to the concrete below with seismic anchors using coupling nuts.** Standard hold down parts are used on top of the floor for all zones with the only difference being the length of the threaded rod. Anchors and hold down material has to be engineered for proper seismic zone. It will be necessary to use alternate anchoring holes in the event the primary holes are obstructed by the stringers supporting the removable tile.

50A.4.3.1 Seismic Zones 0 - 2A

To fasten cabinets or bay frameworks to a raised floor, place two 1-5/8 x 1-5/8 u-channel sections under the stringers. The sections shall be placed perpendicular to the equipment aisle with the continuous slot down. “C” clips shall be used to cover the bottom slotted ends of the u-channel where the threaded rod goes through, to prevent it from spreading when compressed. Use hold down plate engineered for that frame, use two ½ inch threaded rods per U channel, nut, washer, **insulating bushing** and hold down washer on the base of frame. Use “C” clip, washer, lockwasher, and nut on bottom of u-channel. The u-channel should not extend more than four inches past the edge of the stringers or it will block access under the floor. End caps must be used on the u-channel to prevent injury. Torque the nut to 30 foot pounds. Do not over tighten as the tile will become deformed and will be uneven with surrounding tiles

50A.4.3.2 Seismic Zones 2B - 4

In seismic zones 2B and higher, U-channel is not used. Frames shall be anchored in all four corners. Four ½ inch threaded rods are run down to seismic anchors with coupling nuts from the concrete floor. Use hold down plate engineered for that frame, four ½ inch threaded rods, nut, washer, **insulating bushing** and hold down washer on the base of frame. Torque the nut



to 30 foot pounds. Do not over tighten threaded rods as floor tile will deform and make floor uneven.

50A.5 Raised Floor AC Distribution

- The vendor shall provide AC wiring and appropriate conduit to feed power from the customer's AC system. AC wiring shall conform to National Electric Code.
- AC wiring shall be run in an appropriate conduit per code. The conduit shall be supported from the floor pedestals (located near the top). **AT&T does not want the conduit or raceway run on the concrete slab.**

50A.6 Raised Floor Grounding

Section 18 and 19 of this document and ATTP 760-200-110 are the standards for AT&T grounding.



**50B. Raised Floors where equipment attaches directly to the tile,
(Maxcess Floors or equivalent).**

50B.1 Overview

For all new telecommunication equipment space, AT&T is requiring that the equipment be mounted on a raised floor. Requirements for this floor are detailed in **ATTP 760-200-110**. Variations of this Raised Floor have been specially developed to be compatible with all equipment designs and to meet all seismic requirements.

Click here to access: **[ATTP 760-200-110](#)**

If you have any questions on the above Raised Floor practice, please contact William H. Henderson on (404) 810-7249, or E-Mail hendersonwh@att.com

50B.2 Floor Height

The Company's standard for this new floor is a twenty-four inch finish, however a floor up to thirty inches can be obtained on a waiver request basis. Finished floor height is to be measured from concrete floor to top of removable panel.

50B.3 Cabling Overview

Running cable under a raised floor must be done in a manner similar to running cable overhead on cable racks. A specific cable plan record shall be created. This cable plan shall be based on the AT&T development plan, architectural plan and existing telephony records. The AT&T AORS document shall be used as a guide. The cable plan shall be documented as a plan record in the -600 series. All cable paths shall be identified by cable routing coordinates and based on cable type. Primary power feeders (cables from the power plant to BDFB's) shall be run on a cable rack. Cables on this cable rack must be sewn, neat and protected. Cable Rack bridges will be required when crossing a power rack.

Secondary power feeders and transmission cable are run directly on the concrete floor. AC conduits are attached at the high end of the pedestals that support the raised floor. For Fiber Protection System (FPS) refer to sect 22, Fiber Diversity and Protection Guidelines for details.

Golden Path & Non Golden Path shall be run according to Golden Path guidelines. Fire Detection and Ground wires shall be run separate from transmission cables.

Transmission cables shall be run on the concrete following the cabling rules.

50B.3.1 Raised Floor Cabling Rules



- Cable paths shall be designated and recorded in a –600 plan job drawing. No deviation are allowed.
- All cable diversity rules such as “Golden Path” and power must be followed under the floor as well as above.
- Transmission cable to be run neatly directly on concrete floor in designated paths and protected from all sharp metal edges.
- Primary power cables shall be located on a cable rack and recorded on –600 series drawing and sewn as necessary.
- Secondary power cables and coaxial cables shall be run on the concrete slab and shown and recorded on the –600 plan drawing.
- Cable rack bridges should be used for cross aisles per the office cable plan to prevent mixing of shields and intermingling of cable.
- Refer to sect 22 Fiber Diversity and Protection Guidelines document for method of placing FPS (Fiber Protection System) or riser cables.
- Primary power runs from power room to PD/BDFB must to be secured on cable racks under the raised floor. These cable racks shall be mounted on u-channel and must be grounded to central office ground (COG), not isolated ground.
- Primary Distribution that feeds equipment directly (not through a secondary distribution bay), is allowed to use the primary distribution racking system until it reaches the equipment area. While it is on the primary rack, such distribution shall meet all primary distribution requirements. Once it leaves the primary rack, it shall be treated as secondary distribution.
- Secondary power feeders from a PD / BDFB are to be run on concrete floor. If red and blue wire is used, they shall be diversified. They can be run under the same lineup, but should be banded on opposite sides of the lineup.
- Secondary power wire shall be bundled at least every six feet. This bundling may be accomplished by using either waxed twine or plastic wire ties.
- If red and blue wire is used, the red wire bundle shall be separated from the blue wire bundle by a minimum of four (4) inches except at the input to equipment bays or "cross-over " points.
- When secondary power distribution cables must cross, they should do so at as close to a 90-degree angle as possible. The wire bundle that is on top shall be fiber wrapped at the cross point. The fiber wrap shall be secured with either twine or a plastic tie wrap.
- At power wire crossover points there shall only be two bundles. Additional wire must be placed in existing bundles and NOT in additional bundles on top of the existing two bundles.
- Under normal conditions, floor stringers “Shall Not” be removed to install cables. If office and/or job conditions require the stringers to be removed, the procedure must be listed in the MOP and approved by the appropriate AT&T representative.
- The area under the Raised Floor shall not be used for storage.

50B.3.2 Bringing cable up from under raised floor



When bringing cable into racks/cabinets, the removable raised floor tile is cut to the rack/cabinet template, with the edges of the cut hole properly lined to protect the cable, and the cable is brought directly into the racks/cabinets, tapes of any kind are not approved for this purpose. There are several trim products that can be used to line/trim the tile edges of the cut out or hole to protect the cables from the sharp edges of the cut tile (**tape of any type is not allowed**). Refer to ATTP760-200-110 for more details

These trim products or equivalent are recommended:

- “F” Trim Cut-Out Molding/Trim and “Cut Out Sponge Seal”. The “F” shaped trim is used for square shaped cut outs, it is attached to the top/bottom of the tiles with pop rivets or screws. The Sponge Seal is inserted in the F groove and slits are cut thru it to pass cables thru. This product has to be cut to fit and can be obtained from Maxcess Floors or other manufacturers.
- “L” shaped Cut Out Molding/Trim is used the same as the “F” trim but has no groove for the Sponge Seal. This trim is attached to the tile the same as the “F” trim. This product has to be cut to fit and can be obtained from Maxcess Floors, Grom Tek or other manufacturers.
- Some manufactures provide pre-cut square, rectangular and three sided trims cut-out to certain sizes.
- For simple round cut cutouts the industry has available various diameter round grommets i.e. 2”, 3”, 4” & 5”. They can be purchased from Maxcess Floors or other vendors.

50B.3.3 Cable racks

The only cable racks used under the raised floor are for the primary power cable from the power room & vertical racks to cable enclosures.

These cable racks must meet these requirements:

- Horizontal cable rack must be mounted on u-channel anchored to the concrete floor.
- Cable rack must be grounded to integrated ground.
- Cables in vertical rack to cable enclosure must be secured on every strap and rack must be grounded to integrated ground.

50B.4 Equipment Installation

50B.4.1 Leveling of equipment



The raised floor is laser leveled at time of the floor installation so no leveling blocks or shims should be necessary to level the frames. This is especially important in high seismic zones as leveling blocks would cause a rocking motion of the frames during an earthquake. If a vendor finds the floor is not level they should contact the AT&T representative and they will make sure the floor is level before starting the installation.

For additional information refer to **ATTP 760-200-110**.

50B.4.2 Cutting and drilling of removable floor tile

Mark removable floor tile for the cable access from below into the cabinet using template supplied by frame vendor, floor plan drawing, or place frame in proper footprint and mark the tile from the base of the frame or cabinet. Mark the tile for the frame anchoring holes in the same manner. Remove the tile, cut cable access holes, and drill anchoring holes through the tile in an area away **from the equipment** to make sure the equipment area is not contaminated with metal shavings. If the floor plan identifies a future frame on the same tile as the one you are adding a frame, it is necessary to drill and cut the tile for the future frame as you cannot remove the tile later.

For additional information refer to **ATTP 760-200-110**.

50B.4.3 Framework Anchoring Details

To anchor framework to a raised floor, the vendor must first know what earthquake zone is the floor designed for and the seismic zone where the floor is being added, he shall then refer to **ATTP 760-200-110** for anchoring information and details.

It will be necessary to use alternate anchoring holes in the event the primary holes are obstructed by the stringers supporting the removable tile.

50B.5 Raised Floor AC Distribution

- The vendor shall provide AC wiring and appropriate conduit to feed power from the customer's AC system. AC wiring shall conform to National Electric Code.
- AC wiring shall be run in an appropriate conduit per code. It shall be supported from the floor pedestals (located near the top). **AT&T does not allow the conduit run on the concrete slab.**

50B.6 Raised Floor Grounding

Section 18 and 19 of this document and ATTP 760-200-110 are the standards for AT&T grounding.



WORKMANSHIP REQUIREMENTS FOR ALARMS

ATTP 800-614-105
Issue 2, Aug. 1, 2000
Sect 51 issue 2.1

51. Alarm Standards Manual

These instructions are controlled by the NPQ organization and are covered under AT&T Practice ATTP 154-103-101.

Click here to access:

[ATTP 154-103-101](#)

If you have any questions on the content of this Alarm Practice, please contact Robert P. Butler on (770) 483-2766, or E-Mail rpbutler@ems.att.com



53. Earthquake & Disaster Bracing

AT&T standards for Earthquake and Disaster Bracing is incorporated in Practice Numbered 800-610-155.

If you have any questions on the content of this Practice, please contact:

William H. Henderson on (404) 810-7249, or E-Mail hendersonh@ems.att.com